

<b>Notice of Allowability</b>	<b>Application N .</b>	<b>Applicant(s)</b>
	09/696,863	YAMAZAKI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Nikita Wells	2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to "Amendment in Reply to Action" received 14 October 2003.
2.  The allowed claim(s) is/are 10,21,22,24-26,28 and 46-69.
3.  The drawings filed on 25 October 2000 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. 08/855,818.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - (a)  The translation of the foreign language provisional application has been received.
6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <input type="checkbox"/> Notice of References Cited (PTO-892)   | <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                       | <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No. <u>1103</u> | <input type="checkbox"/> Examiner's Amendment/Comment                             |
| <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                 | <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|   | <input type="checkbox"/> Other  |

## **DETAILED ACTION**

1. The Applicant filed a “Request for Continued Examination” and “Response” received April 28, 2003, where he amended claims 10, 21, 24, 25, and 28; canceled claims 1-9, 11-20, 23, 27, and 29-45; added new claims 46-61. The Applicant filed an “Amendment in Reply to Action of June 13, 2003” received October 14, 2003, where he added new claims 62-69.

### ***Allowable Subject Matter***

2. Claims 10, 21, 22, 24-26, 28, and 46-69, are allowed.

3. The following is an examiner’s statement of reasons for allowance:

Claims 10, 21, 22, 24-26, and 28, have previously been allowed (see June 13, 2003 Office Action) since prior art failed to disclose an ion doping apparatus which utilizes coils whose diameter are monotonically decreased as the flow of ions extends down stream along the beam axis towards the substrate. Claims 46-53 have previously been allowed since prior art failed to disclose an ion doping apparatus having means for generating an ion beam with an elongated beam cross section, the first magnetic field having the same magnitude as the second magnetic field and an opposite direction to the second magnetic field.

According to the “Amendment in Reply to Action of June 13, 2003” the Applicant presented arguments in favor of allowance of the existing claims and demonstrated to the Examiner’s satisfaction that, with respect to the 35 U.S.C. 102(b) rejection of the independent claims 54 and 58, the reference of Yoshida et al. is not applicable to the Applicant’s invention, since it does not disclose an ion doping apparatus comprising: a means for generating an ion

beam having an elongated cross section, and a means for applying a magnetic field and an electric field to the ion beam to separate the ion beam into at least two ion beams on a mass basis.

With respect to the newly added independent claims 62 and 66, prior art fails to disclose or make obvious an ion doping apparatus having means for generating an ion beam with an elongated beam cross section, the first magnetic field having the same magnitude as the second magnetic field and an opposite direction to the second magnetic field.

The dependent claims 55-57, 59-61, 63-65, and 67, are allowed by virtue of their dependence upon claims 54, 58, 62, and 66, respectively.

### ***Conclusion***

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (703) 305-0416. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703) 308-4116. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 09/696,863  
Art Unit: 2881

Page 4

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Nikita Wells, Primary Examiner  
Art Unit 2881  
November 19, 2003